

# MMWR™

MORBIDITY AND MORTALITY WEEKLY REPORT

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## Hypothermia-Related Deaths — Vermont, October 1994–February 1996

Hypothermia is a lowering of the core body temperature to  $\leq 95$  F ( $\leq 35$  C) (1). From 1979 through 1992, a total of 10,550 persons in the United States died from hypothermia, an average of 754 deaths per year (range: 557–1021 deaths) (2). From October 1994 through February 1996, a total of 10 hypothermia-related deaths were reported by the chief medical examiner in Vermont. The average age of the 10 decedents was 62 years (range: 18–88 years); eight were men. Seven decedents were reported to have had histories of mental illness, and alcohol abuse was mentioned on the police or pathology report for two decedents. This report summarizes the investigation of three of these deaths and describes risk factors commonly associated with hypothermia.

**Case 1.** In March 1995, an 18-year-old woman was found dead, lightly clothed, and covered in snow in the woods behind her house. During the preceding 24 hours, the minimum temperature had been 34 F (1 C), and 0.04 inches of precipitation had fallen. The woman had a prolonged history of drug abuse. At autopsy, a blood test revealed the presence of benzodiazepines (diazepam, nordiazepam, temazepam, and oxazepam) and diphenhydramine. Drug overdose was listed as the primary cause of death with hypothermia as a contributing cause.

**Case 2.** In November 1995, a 74-year-old man was found without a coat lying in a field 250 feet from his residence; he was unresponsive and had no palpable pulse. The outside temperature had been 11 F (–12 C) the previous night. He lived alone and, during the previous 2 weeks, had been reported to be increasingly confused with incidences of wandering and entering wrong apartments. He was last seen at 6:30 p.m. the evening before he was discovered. On admission to the hospital, his core body temperature was 68 F (20 C), and he died despite resuscitative efforts. He had a medical history of dementia, atherosclerotic cardiovascular disease, and diabetes. Cold exposure was listed as the primary cause of death, dementia as a secondary cause, and atherosclerotic cardiovascular disease and diabetes as contributory medical conditions.

**Case 3.** In January 1996, a 46-year-old woman was found frozen in a snow bank; a bottle of liquor was nearby. She had a history of depressive disorder and alcohol abuse. Two days before she was found, she reportedly had been drinking heavily

*Hypothermia-Related Deaths — Continued*

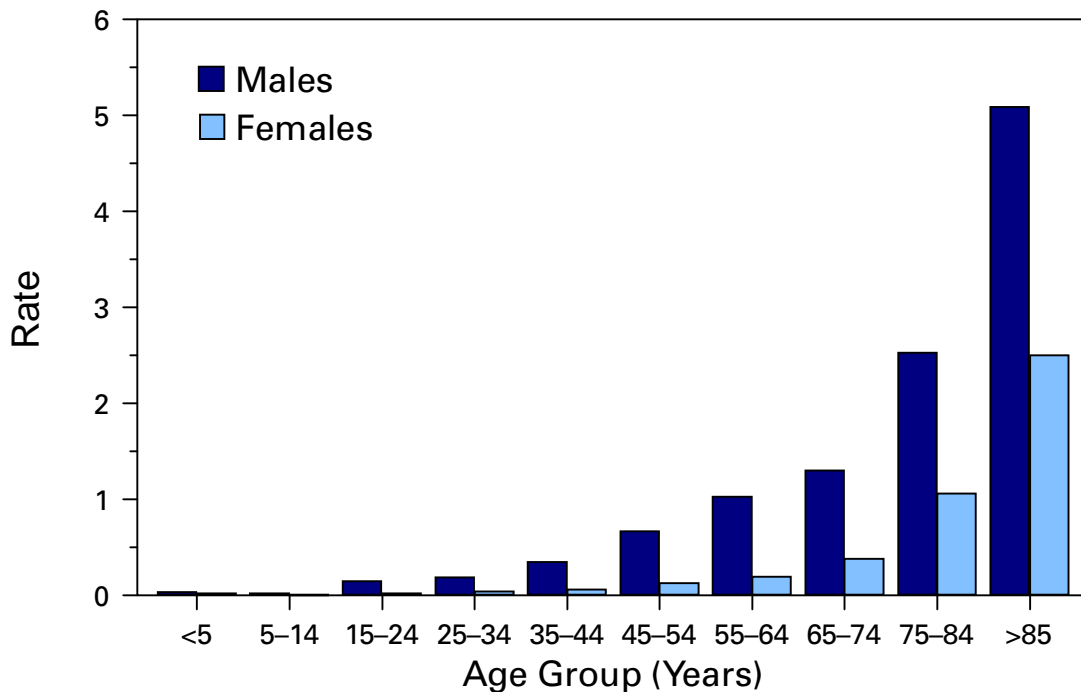
when she left one house to walk to another. At autopsy, her blood alcohol concentration (BAC) was 0.33 g/dL. Hypothermia was listed as the primary cause of death, with ethanol intoxication as a contributing factor.

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**Editorial Note:** From 1979 through 1992, approximately half of all hypothermia deaths in the United States occurred among persons aged  $\geq 65$  years (Figure 1). The annual death rate for hypothermia in this age group was 1.3 per 100,000 persons compared with the annual, age-adjusted death rate for hypothermia of 0.3 per 100,000 (3). Elderly persons particularly are at risk for hypothermia because of medical and socio-economic factors such as underlying diseases, social isolation, and physiologic changes (e.g., lack of appropriate vasoconstriction in response to cold environments, decreased basal metabolic rate, and impaired shivering mechanism). The risk for hypothermia-related death also was greater in men than in women (age-adjusted death rates, 2.0 versus 0.7 per 100,000 among persons aged  $\geq 65$  years, respectively); reasons for this difference have not been defined.

Ethanol abuse, which is strongly associated with hypothermia, results in vasodilation and interferes with peripheral vasoconstriction, an important physiologic mechanism of defense against the cold. Neuroleptic drugs also predispose a person to hypothermia by inducing vasodilation and suppressing the shivering response. The hypothermic effects of these types of drugs are amplified by lower ambient tempera-

**FIGURE 1. Annual death rate\* associated with hypothermia†, by age group and sex — United States, 1979–1992**



\* Per 100,000 population.

† *International Classification of Diseases, Ninth Revision*, codes E901.0, E901.8, and E901.9

*Hypothermia-Related Deaths — Continued*

tures. Other risk factors for hypothermia include hypothyroidism, mental illness, dehydration and starvation, homelessness and poverty, immobilizing illness, and sustained contact with materials that promote conductive heat loss (e.g., water, solvents, and metals) (1).

Hypothermia-related morbidity and mortality can be prevented by early recognition and prompt medical care. Early indications of hypothermia include shivering, numbness, fatigue, poor coordination, slurred speech, impaired mentation, blueness or puffiness of the skin, and irrationality. The use of insulated clothing that does not retain moisture and appropriate head gear can assist in preventing cold-related illness because 30% of heat loss comes from the head. Immersion in water and wet clothing during cold weather should be avoided. In addition, persons who are outdoors in cold conditions should increase fluid and calorie intake, abstain from consuming alcoholic beverages, and avoid overexertion and sweating.

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### **Estimates of Retailers Willing to Sell Tobacco to Minors — California, August–September 1995 and June–July 1996**

The prevalence of tobacco use among adolescents is increasing, and the most common source of tobacco products for persons aged <18 years (minors) is retail stores (1). In 1991, an estimated 29.6 million packs of cigarettes were sold illegally to minors in California, and an estimated 255 million packs were sold illegally to minors nationwide (2). Federal law (i.e., the Synar Amendment\*) enacted in July 1992 requires all states that receive federal funds for prevention and treatment of substance abuse to have and enforce laws prohibiting the sale or distribution of tobacco to minors, conduct annual statewide inspections of over-the-counter tobacco outlets and vending machines to assess the statewide rate of illegal tobacco sales to minors, and develop a plan to decrease the illegal sales rate to  $\leq 20\%$  over several years (3). On September 28, 1994, California enacted the Stop Tobacco Access to Kids Enforcement (STAKE) Act<sup>†</sup>, which requires that 1) tobacco retailers (i.e., vendors) post warning signs at each point of purchase and check the identification of persons who appear aged <18 years; 2) the California Department of Health Services (CDHS) develop a statewide enforcement program and establish a toll-free telephone number for reporting observed illegal tobacco sales to minors; and 3) CDHS annually assess and report the rate of illegal sales of tobacco products to minors. This report describes the retailer education and enforcement program and summarizes the results of the first two annual assessments (Youth Tobacco Purchase Surveys [YTPSs]). The findings indicate

\*Public Law 102-321, §1926 of the Public Health Service Act (42 USC §300x-26).

<sup>†</sup>Stop Tobacco Access to Kids Enforcement (STAKE) Act: SB1927, September 28, 1994. California Business and Professional Code, Sections 22950–9.

*Tobacco Sales to Minors — Continued*

that, from August–September 1995 to June–July 1996, among over-the-counter tobacco outlets the percentage of retailers who asked for age identification increased substantially, the percentage of stores displaying warning signs on age restrictions increased, and the percentage of retailers willing to sell tobacco products to minors decreased.

**Education About and Enforcement of Youth Access Laws**

In response to provisions of the STAKE Act, in August 1995 CDHS initiated an ongoing public and retailer education program before the enforcement of the law began on December 27, 1995. The education program consisted of an advertisement in a retail trade journal; a statewide press conference; paid radio and television commercials and billboard advertisements promoting a toll-free telephone number; a direct mailing of educational materials and warning signs to approximately 27,000 retailers; and educational materials provided to local government officials, retail trade groups, local health groups, chambers of commerce, and state legislators. In addition, 120 local and regional community organizations conducted educational, policy development, and media activities to stimulate compliance with youth access laws.

The STAKE Act requires that the CDHS statewide enforcement program include 15- and 16-year-old minors for unannounced inspections of tobacco retailers. Civil penalties of \$200–\$6000 can be levied against the business owner depending on the number of offenses during a 5-year period. During December 27, 1995–June 10, 1996 (the period before the second YTPS began), CDHS conducted 865 unannounced inspections in 22 of the state's 58 counties. As of December 16, 1996, fines totaling \$65,550 had been paid by 258 business owners among the 286 who were in violation of the STAKE Act during December 27, 1995–June 10, 1996, and 28 business owners are involved in litigation or further administrative processing with CDHS.

**Youth Tobacco Purchase Surveys**

The 1995 YTPS was the first state-representative random survey in California of illegal tobacco sales to minors and was conducted during August 2–September 7, 1995. A second YTPS was conducted during June 11–July 26, 1996, after initiation of the retailer education campaign and enforcement program. The YTPS methodology was designed to permit statistically valid statewide estimates and year-to-year comparisons of over-the-counter tobacco sales to minors. The California State Board of Equalization provided a list of businesses most likely to sell tobacco over the counter, including all convenience stores, gas stations, drug stores, liquor stores, supermarkets, and cigar stores in California. Using simple random sampling, sample sizes of 405 for 1995 and 434 for 1996 were obtained after eliminating stores that were no longer in business, were not tobacco outlets, could not be located (four in 1995 and 21 in 1996), or were considered unsafe by the survey teams (none in 1995 and nine in 1996). Odds ratios and p values were calculated for the change from 1995 to 1996. The odds ratios for asking age and/or for identification, presence of warning signs, and total sales were adjusted for store type.

Newspaper advertisements and contacts in local health departments, tobacco-control organizations, and community programs were used to recruit the 63 minors aged 15–16 years (including 31 males and 32 females) who participated in the 1995 YTPS and 67 minors aged 15–16 years (including 29 males and 38 females) who participated in the 1996 YTPS. The adult escorts included staff members from local

*Tobacco Sales to Minors — Continued*

tobacco-control organizations. Teams consisting of one or two adults and two minors made one purchase attempt per store using the following protocol: an adult escort entered the store immediately before or shortly after one of the minors entered the store. The adult observed the transaction between the retailer and the minor and noted age-restriction signs posted inside the store. The minors could choose either cigarettes or smokeless tobacco. If asked by retailers, the minors were required to truthfully state their age and that they carried no age identification. Retailers were considered to be willing to sell tobacco products to minors if they recorded a sale on a cash register or placed the tobacco on the counter and asked for money. Retailers who refused to sell tobacco to the minor for any reason were considered to be not willing to illegally sell tobacco to the minor. If the retailer was willing to sell tobacco to the minor, the minor stated that he or she did not have enough money and left the store.

Overall, the percentage of retailers willing to sell tobacco to minors decreased from the assessment period in 1995 (37.0%) to 1996 (29.3%) (adjusted odds ratio [AOR], adjusted by type of store=0.7,  $p<0.05$ ) (Table 1). Although sales to minors decreased in most types of stores, the decrease was statistically significant only for convenience stores selling gasoline (from 48.6% to 28.9%; odds ratio=0.4,  $p<0.01$ ). From 1995 to 1996, there were similar percentages of retailers willing to sell tobacco to minors when the retailer asked for identification (2.4% in 1995 compared with 3.5% in 1996) or when the retailer asked either the minor's age or for identification (4.4% in 1995 compared with 3.3% in 1996).

However, the percentage of stores in which retailers asked minors for identification increased from 41.7% to 53.5% (AOR, adjusted by type of store=1.6,  $p<0.05$ ), and the percentage of stores in which the retailer asked either the minor's age or for identification increased from 61.7% to 70.3% (AOR=1.5,  $p<0.01$ ). The percentage of stores that displayed age-of-sale warning signs increased from 32.6% to 63.8% (AOR=3.6,  $p<0.01$ ).

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**Editorial Note:** The findings in this report are consistent with previous reports indicating that illegal sales to minors may be effectively decreased by the combination of increased merchant education and enforcement of laws prohibiting sales of tobacco to minors, and that the requirement of proof of age by retailers is associated with very low sales rates (4–7). In this report, sales were less likely in both years when age was asked and/or identification was requested and when warning signs were present.

The findings in this report are subject to at least two limitations. First, because comparable data are available for only 2 years, they may not indicate a trend. Second, because the STAKE Act required statewide implementation, an evaluation design using control communities was not possible, and further assessment is needed to examine the possible influences of other factors on the rate of illegal sales to minors.

The efforts of government and the private sector in California provide one model approach for reducing tobacco sales to minors. For example, the STAKE Act contains strengthening provisions that were not specifically required by the Synar Amendment. In addition, the STAKE Act was amended in 1995 to prohibit the sale of tobacco

**TABLE 1. Number and percentage of store visits and number and percentage of retailers willing to sell tobacco products to minors\*, by category and year, August–September 1995 and June–July 1996, and percentage point change from 1995 to 1996 of retailers willing to sell tobacco to minors — California**

Category	1995					1996					% Point change from 1995 to 1996		
	Store visits		Retailers willing to sell tobacco			Store visits		Retailers willing to sell tobacco			%	OR <sup>§</sup>	p value <sup>¶</sup>
	No.	(%)	No.	(%)	p value <sup>†</sup>	No.	(%)	No.	(%)	p value <sup>†</sup>			
<b>Type of store</b>													
Drug store/pharmacy	36	( 8.9)	8	(22.2)		31	( 7.1)	7	(22.6)		+ 0.4	1.0	NS**
Gas/convenience	70	( 17.3)	34	(48.6)	<0.05	121	( 27.9)	35	(28.9)	NS	-19.7	0.4	<0.01
Gas station only	19	( 4.7)	9	(47.4)		11	( 2.5)	5	(45.5)		- 1.9	0.9	NS
Liquor store	61	( 15.1)	27	(44.3)		77	( 17.7)	27	(35.1)		- 9.2	0.7	NS
Small grocery/convenience	133	( 32.8)	49	(36.8)		141	( 32.5)	42	(29.8)		- 7.0	0.7	NS
Supermarket	69	( 17.0)	17	(24.6)		45	( 10.4)	9	(20.0)		- 4.6	0.8	NS
Other <sup>††</sup>	17	( 4.2)	6	(35.3)		8	( 1.8)	2	(25.0)		-10.3	0.6	NS
<b>Clerk asked age</b>													
No	301	( 74.3)	143	(47.5)	<0.05	337	( 77.7)	124	(36.8)	<0.05	-10.7	0.6	<0.01
Yes	104	( 25.7)	7	( 6.7)		97	( 22.4)	3	( 3.1)		- 3.1	0.5	NS
<b>Clerk asked for identification</b>													
No	236	( 58.3)	146	(61.9)	<0.05	202	( 46.5)	119	(58.9)	<0.05	- 3.0	0.9	NS
Yes	169	( 41.7)	4	( 2.4)		232	( 53.5)	8	( 3.5)		+ 1.1	1.5	NS
<b>Clerk asked age or for identification</b>													
No	155	( 38.3)	139	(89.7)	<0.05	129	( 29.7)	117	(90.7)	<0.05	+ 1.0	1.1	NS
Yes	250	( 61.7)	11	( 4.4)		305	( 70.3)	10	( 3.3)		- 1.1	0.7	NS
<b>Warning signs in the store</b>													
No	273	( 67.4)	115	(42.1)	<0.05	157	( 36.2)	69	(44.0)	<0.05	+ 1.9	1.0	NS
Yes	132	( 32.6)	35	(26.5)		277	( 63.8)	58	(20.9)		- 5.6	0.7	NS
<b>Total</b>	<b>405</b>	<b>(100.0)</b>	<b>150</b>	<b>(37.0)</b>		<b>434</b>	<b>(100.0)</b>	<b>127</b>	<b>(29.3)</b>		<b>- 8.2</b>	<b>0.7</b>	<b>&lt;0.05</b>

\*Persons aged <18 years.

<sup>†</sup>Tests for the difference within the same year in the number of retailers willing to sell tobacco to minors between store types, whether or not retailer asked for age and/or identification, and presence or absence of warning signs.

<sup>§</sup>Odds ratio (OR) for change in number of retailers willing to sell tobacco to minors from 1995 to 1996. OR for asking age and/or asking for identification, presence of warning signs, and total number of retailers willing to sell tobacco to minors were adjusted for store type.

<sup>¶</sup>Tests for the difference from 1995 to 1996 in the number of retailers willing to sell tobacco to minors.

\*\*Not significant.

<sup>††</sup>Includes other store types listed by the California State Board of Equalization as selling tobacco products (e.g., gift stores and cigar stores).

*Tobacco Sales to Minors — Continued*

products from vending machines except those in bars not adjoining restaurants, while a different law<sup>5</sup> bans the sale of individual cigarettes from open packages. Despite these efforts, the findings in this report indicate that, for 1996, one third of stores did not post warning signs, minors were not asked for proof of age identification in approximately half of stores, and retailers were willing to sell tobacco to minors in almost one third of purchase attempts.

On August 28, 1996, the Food and Drug Administration (FDA) issued regulations that prohibit sales of tobacco to persons aged <18 years, require retailers to request photographic identification to verify the age of all persons aged <27 years who request tobacco, ban vending machines and self-service displays except in facilities where only adults are permitted, ban sales of single cigarettes and packages with <20 cigarettes, and eliminate free samples of cigarettes and smokeless tobacco products (8). The effective date for the provisions prohibiting tobacco sales to minors and requiring photographic identification is February 28, 1997, and the effective date for the provisions affecting sales through vending machines, self-service displays, single cigarettes sales, and distribution of free samples is August 28, 1997. The FDA rule should further enhance state and local efforts to decrease illegal sales of tobacco to minors. In addition, the Substance Abuse and Mental Health Services Administration has developed technical-assistance guidelines addressing statewide sampling methodologies, inspections (i.e., compliance checks), and interventions; these guidelines can be used by states to develop programs that comply with requirements of the Synar Amendment (9).

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<sup>5</sup>California Penal Code, Section 308.2.

### Decreased Antibody Response to Influenza Vaccine Among Nursing-Home Residents Who Received Recalled Vaccine — New York, 1996

Following a voluntary recall in November 1996 of 11 lots\* of Fluogen<sup>®</sup>† trivalent influenza vaccine (Parke-Davis Division, Warner Lambert Company, Morris Plains, New Jersey), the New York State Department of Health and CDC evaluated antibody response to the 1996–97 influenza vaccine among residents (n=86) of three nursing homes who received recalled vaccine and among residents (n=86) of three other nursing homes who received vaccine produced by a different manufacturer. The Fluogen<sup>®</sup> lots were recalled because the monitored quantity of A/Nanchang/933/95(H3N2) hemagglutinin antigen in the 1996–97 influenza vaccine had declined since the vaccine initially was released; the reason for this decrease is unknown. The findings of this analysis indicate that, compared with elderly nursing-home residents who received influenza vaccine from a different manufacturer, residents who received Fluogen<sup>®</sup> from recalled lots had moderately lower antibody responses to the influenza A/Nanchang/933/95(H3N2) component of the 1996–97 influenza vaccine.

Medical records were reviewed for and blood samples were obtained from the 172 nursing-home residents who received influenza vaccine. Postvaccination serum samples were analyzed for antibody against all three components of the 1996–97 vaccine using the hemagglutination-inhibition test (1).

For the group of residents that received recalled vaccine, both geometric mean antibody titers and the percentage of residents with titers  $\geq 1:40$  against the A/Nanchang/933/95(H3N2) vaccine component were significantly lower than for the group of residents that received vaccine from a different manufacturer (Table 1). For both groups of residents, antibody titers were similar for the B/Harbin/07/94 and A/Texas/36/91(H1N1) vaccine components. The analysis also assessed demographic characteristics, chronic medical conditions, previous vaccination status, and activity levels; however, none of these factors accounted for the group-specific differences in antibody titers.

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**Editorial Note:** Based on the finding in New York that antibody response among nursing-home residents who received recalled Fluogen<sup>®</sup> was moderately lower than that among residents who received influenza vaccine from a different manufacturer, health-care providers might consider revaccinating persons who received recalled Fluogen<sup>®</sup>. Several factors have been considered for determining whether persons who received recalled Fluogen<sup>®</sup> should receive an additional dose of the 1996–97 influenza vaccine. First, although higher postvaccination antibody levels generally are

\*Lot numbers are 00176P, 00276P, 00576P, 00586P, 00676P, 00686P, 00786P, 00886P, 00966P, 00986P, and 01066P.

†Use of trade names and commercial sources is for identification only and does not imply endorsement by the U.S. Department of Health and Human Services or the Public Health Service.



*Influenza Vaccine — Continued***TABLE 1. Geometric mean antibody titer and percentage of antibody  $\geq 1:40$  in nursing-home residents who received either recalled Fluogen<sup>®</sup> \* or influenza vaccine from a different manufacturer, by vaccine component — New York, 1996**

Category/ Vaccine component	Received recalled Fluogen <sup>®</sup> (n=86)	Received vaccine from a different manufacturer (n=86)	p value <sup>†</sup>
<b>Geometric mean titers</b>			
A/Nanchang/933/95(H3N2)	33.2	54.8	0.01
A/Texas/36/91(H1N1)	73.8	54.8	0.12
B/Harbin/07/94	66.5	77.5	0.33
<b>% Residents with titers <math>\geq 1:40</math></b>			
A/Nanchang/933/95(H3N2)	52.3%	67.4%	0.04
A/Texas/36/91(H1N1)	80.2%	75.6%	0.54
B/Harbin/07/94	77.9%	81.4%	0.57

\* Use of trade names and commercial sources is for identification only and does not imply endorsement by the U.S. Department of Health and Human Services or the Public Health Service.

<sup>†</sup> P values for geometric mean titers were calculated using the Wilcoxon-rank sum two-sample test; for the percentage of residents with titers  $\geq 1:40$ , the Mantel-Haenszel chi-square test was used.

associated with greater protection from influenza-like illness and its complications (2–4), there is no absolute antibody titer that ensures protection. Second, because revaccination does not ensure development of higher antibody titers, it is difficult to estimate the potential clinical and public health benefits associated with revaccination. Finally, a recent study of young adults indicated that antibody titers did not differ among groups randomized to receive either recalled or nonrecalled Fluogen<sup>®</sup> manufactured for the 1996–97 influenza season (P.A. Gross, S. Sperber, Hackensack University Medical Center, personal communication, 1996). Although the total number of persons who received vaccine from recalled lots of Fluogen<sup>®</sup> represent only 5%–7% of all persons nationwide who received a 1996–97 influenza vaccination, most doses of vaccine have been administered before the influenza season (October–mid-November), and all remaining supplies of 1996–97 vaccine are limited.

Based on these factors, CDC and the Food and Drug Administration recommend that physicians consider vaccinating the following persons with the remaining supplies of influenza vaccine, in order of priority: 1) all high-risk persons (5) who have not received any doses of the 1996–97 influenza vaccine, especially those with chronic medical conditions; and 2) high-risk persons, especially those with chronic, debilitating medical conditions, who received Fluogen<sup>®</sup> from recalled lots. Revaccination is **not** recommended for other persons, including healthy persons who received Fluogen<sup>®</sup> from a recalled lot.

An alternative strategy for controlling influenza type A among high-risk patients is the use of the antiviral agents amantadine or rimantadine, especially for chronically ill, institutionalized, or severely debilitated persons who have been or may be exposed to influenza type A during an outbreak. Amantadine and rimantadine are equally effective for prevention and treatment of influenza type A infection. Additional information

*Influenza Vaccine — Continued*

about the indications, dosage, side effects, and contraindications for these drugs is available in the recommendations of the Advisory Committee on Immunization Practices (5) and the drug package inserts.

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### Update: Influenza Activity — United States, 1996–97 Season

In collaboration with the World Health Organization (WHO), its collaborating laboratories, and state and local health departments, CDC conducts surveillance to monitor influenza activity and to detect antigenic changes in the circulating strains of influenza viruses. This report summarizes influenza activity in the United States from September 29 through December 7, 1996, and indicates that influenza activity has increased since mid-November.

From September 29 through December 7, a total of 602 (7%) of 8927 respiratory specimens tested by WHO collaborating laboratories in the United States were positive for influenza virus. Of the 602 positive cultures, 458 (76%) were reported during November 17–December 7. Of the 602 influenza isolates, 595 (99%) were influenza type A, and seven (1%) were type B. Of the 158 influenza type A isolates subtyped, all were A(H3N2). CDC further characterized 13 influenza A(H3N2) isolates, and all were antigenically similar to the H3N2 component of the 1996–97 influenza vaccine.

Regional influenza activity\* was first reported by state or territorial epidemiologists during the week ending October 19 in Maryland and continued to be reported from one to two states each week through the week ending November 16; regional activity increased to seven, 10, and 14 states for the weeks ending November 23, November 30, and December 7, respectively. Widespread activity was first reported in Colorado and Pennsylvania during the week ending November 23, and in Connecticut during the week ending December 7. For the first time this season, the percentage of patients with influenza-like illness who visited sentinel physicians (5% for the week ending December 7) exceeded baseline levels (0–3%).

During September 29–December 7, the percentage of deaths attributed to pneumonia and influenza (P&I) as reported by the vital statistics offices of 121 cities has not

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\*Levels of activity are 1) *no activity*; 2) *sporadic*—sporadically occurring influenza-like illness (ILI) or culture-confirmed influenza with no outbreaks detected; 3) *regional*—outbreaks of ILI or culture-confirmed influenza in counties with a combined population of <50% of the state's total population; and 4) *widespread*—outbreaks of ILI or culture-confirmed influenza in counties with a combined population of ≥50% of the state's total population.

*Influenza Activity — Continued*

exceeded the epidemic threshold<sup>†</sup>. Peaks in physician-reported influenza morbidity typically precede peaks in P&I mortality by 2–5 weeks (1). As of December 7, a total of 23 outbreaks of influenza were reported to CDC; five (one in Indiana and two each in New York and Wisconsin) are described here.

**Indiana**

During November 24–December 1, a total of 431 (65%) of 660 persons aged 15–24 years attending a vocational training camp in Indiana had onset of acute febrile respiratory manifestations (fever  $\geq 100$  F [ $\geq 38$  C] and cough); 20 (10%) of 200 staff had onset of similar illness. On November 27, three of four nasopharyngeal swab specimens obtained from ill persons were positive for influenza type A by rapid antigen-detection test. At the state public health laboratory, three of these specimens were further subtyped as influenza A(H3N2). Before the outbreak, 56 (9%) camp attendees and approximately 90% of the staff had been vaccinated with the 1996–97 influenza vaccine. During the Thanksgiving break, all persons who were asymptomatic left the camp, and symptomatic persons remained at the camp. After all attendees returned to the camp on December 1, only three additional cases were identified.

**New York**

During October 1–19, a total of 38 (50%) of 76 residents of two of the 17 units in a 571-bed long-term-care facility in Rochester, New York, had onset of acute febrile respiratory manifestations. Of the 442 employees of the facility who responded to a questionnaire, 46 (10%) had onset of similar illness. Of the nasopharyngeal swab specimens obtained from 15 ill residents, six (40%) were positive for influenza type A at the state public health laboratory; four of these isolates were sent to CDC and further characterized as influenza A/Wuhan/359/95-like(H3N2). None of the residents or staff had received influenza vaccine before the outbreak. A total of 529 (93%) residents and 581 (75%) of 780 employees were vaccinated during the outbreak. Residents of the two affected units were isolated from residents of other units during October 4–18 and October 10–25, respectively. One resident was hospitalized with pneumonia.

**New York City**

During November 6–16, a total of 25 (5%) of 499 residents of a nursing home had onset of acute respiratory manifestations. All ill residents were living on seven floors of the 13-floor facility. Fifteen (2%) of 650 employees also had onset of similar illness. Of nasopharyngeal swab specimens obtained from eight ill residents, five were positive for influenza type A by a rapid antigen detection test. One of these specimens was cultured and confirmed as influenza type A. During October 1996, a total of 427 (91%) of 470 residents for whom information was available had received influenza vaccine. During November 7–13, residents of the two floors affected first were isolated from residents of other floors, and the staff assigned to these floors did not circulate to other floors. In addition, on November 8, amantadine was administered to all 80 residents on those two floors. On November 12, amantadine was administered to all other asymptomatic residents. Nine patients were hospitalized; two developed pneumonia, and seven had exacerbation of underlying medical conditions.

<sup>†</sup>The epidemic threshold is 1.645 standard deviations above the seasonal baseline. The expected seasonal baseline is projected using a robust regression procedure in which a periodic regression model is applied to observed percentages of deaths from P&I since 1983.

*Influenza Activity — Continued***Wisconsin**

On September 19, an outbreak of acute febrile respiratory illness began among students at a university in Milwaukee. Of the nasopharyngeal swab specimens obtained from 295 ill students, 47 were positive for influenza type A. Amantadine was administered to severely ill students. As of December 6, the outbreak was ongoing.

On November 25, an outbreak of acute febrile respiratory illness began among students at another university in Milwaukee. Seven (47%) of the 15 nasopharyngeal specimens cultured were positive for influenza type A. As of December 6, the outbreak was still in progress.

Ten isolates from the outbreaks in Milwaukee were identified as influenza A(H3N2) virus; one of these was antigenically characterized by CDC as influenza A/Wuhan/359/95-like(H3N2).

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**Editorial Note:** During the 1996–97 influenza season, 99% of influenza viruses identified have been type A, and all subtyped isolates have been type A(H3N2). Because influenza A(H3N2) has been associated with increased morbidity and mortality among the elderly (2–4), nursing homes should routinely offer all residents influenza vaccine and should develop contingency plans for rapid administration of amantadine or rimantadine during suspected or confirmed influenza type A outbreaks. The recommended period for influenza vaccination is from the beginning of October through mid-November (5). However, influenza vaccine should continue to be offered to unvaccinated persons at high risk for complications even after influenza activity is documented in a community. During influenza type A outbreaks, amantadine or rimantadine can be administered for the 2-week period following vaccination to provide protection until vaccine-induced antibody has developed (5). Amantadine and rimantadine also are effective for treatment of influenza type A if initiated within 48 hours of illness onset.

Throughout the influenza season, surveillance data collected by CDC is updated weekly and is available through the CDC voice information system, telephone (404) 332-4551, or the fax information system, telephone (404) 332-4565, by requesting document number 361100. Information about local influenza activity is available from many county and state health departments.

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*Influenza Activity — Continued*

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Notice to Readers**Combined Issues of *MMWR***

A December 27 *MMWR* will not be published. The next issue will be volume 45, numbers 51 and 52, dated January 3, 1997, and will include the figure and tables of notifiable disease and deaths for the weeks ending December 21 and December 29, 1996.

**Erratum: Vol. 45, No. 47**

In the article "Accessibility to Minors of Cigarettes from Vending Machines—Broward County, Florida, 1996" (page 1036), the confidence intervals (CIs) for the findings presented in the text and Table 1 were incorrect. Below is Table 1 with the corrected CIs; CIs in the text should have matched those presented in this table.

**TABLE 1. Number of successful attempts by minors\* to purchase cigarettes from vending machines, by category — Broward County, Florida, February–March 1996**

Category	No. attempts	Successful attempts		
		No.	(%)	(95% CI†)
<b>Age (yrs)</b>				
<17	71	25	(35.2)	(24.2%–47.5%)
17	32	9	(28.1)	(13.8%–46.8%)
<b>Sex of minor</b>				
Male	50	10	(20.0)	(10.0%–33.7%)
Female	53	24	(45.3)	(31.6%–59.6%)
<b>Type of store</b>				
Bar	64	21	(32.8)	(21.6%–45.7%)
Hotel/Motel	5	2	(40.0)	( 5.3%–85.3%)
Restaurant	27	8	(29.6)	(13.8%–50.2%)
Other‡	7	3	(42.9)	( 9.9%–81.6%)
<b>Warning sign</b>				
Yes	84	30	(35.7)	(25.6%–46.9%)
No	19	4	(21.1)	( 6.1%–45.6%)
<b>Total</b>	<b>103</b>	<b>34</b>	<b>(33.0)</b>	<b>(24.1%–43.0%)</b>

\*Persons aged <18 years.

†Confidence interval.

‡Includes bowling lanes, country clubs, pool halls, and amusement centers.

**Erratum: Vol. 45, No. 49**

In the article "Accessibility to Minors of Smokeless Tobacco Products—Broward County, Florida, March–June 1996" (page 1079), the confidence intervals (CIs) for the findings presented in the text and Table 1 were incorrect. Below is Table 1 with the corrected CIs; CIs in the text should have matched those presented in this table.

**TABLE 1. Number of attempts and number and percentage of successful attempts by minors\* to purchase smokeless tobacco,† by category — Broward County, Florida, March–June 1996**

Category	No. attempts	Successful attempts		
		No.	(%)	(95% CI <sup>§</sup> )
<b>Age (yrs)</b>				
<17	110	37	(33.6)	(24.9%–43.3%)
17	15	3	(20.0)	( 4.3%–48.1%)
<b>Sex of minor</b>				
Male	75	25	(33.3)	(22.9%–45.2%)
Female	50	15	(30.0)	(17.9%–44.6%)
<b>Type of store</b>				
Pharmacy	33	10	(30.3)	(15.6%–48.7%)
Convenience	20	17	(85.0)	(62.1%–96.8%)
Grocery	25	3	(12.0)	( 2.5%–31.2%)
Gas	41	9	(22.0)	(10.6%–37.6%)
Smoke shops¶	6	1	(16.7)	( 0.4%–64.1%)
<b>Warning sign</b>				
Yes	96	30	(31.3)	(22.2%–41.5%)
No	29	10	(34.5)	(17.9%–54.3%)
<b>Total</b>	<b>125</b>	<b>40</b>	<b>(32.0)</b>	<b>(23.9%–40.9%)</b>

\*Persons aged <18 years.

†Snuff or loose-leaf or fine-cut chewing tobacco.

§Confidence interval.

¶Businesses where the predominant merchandise is tobacco or tobacco-related products.

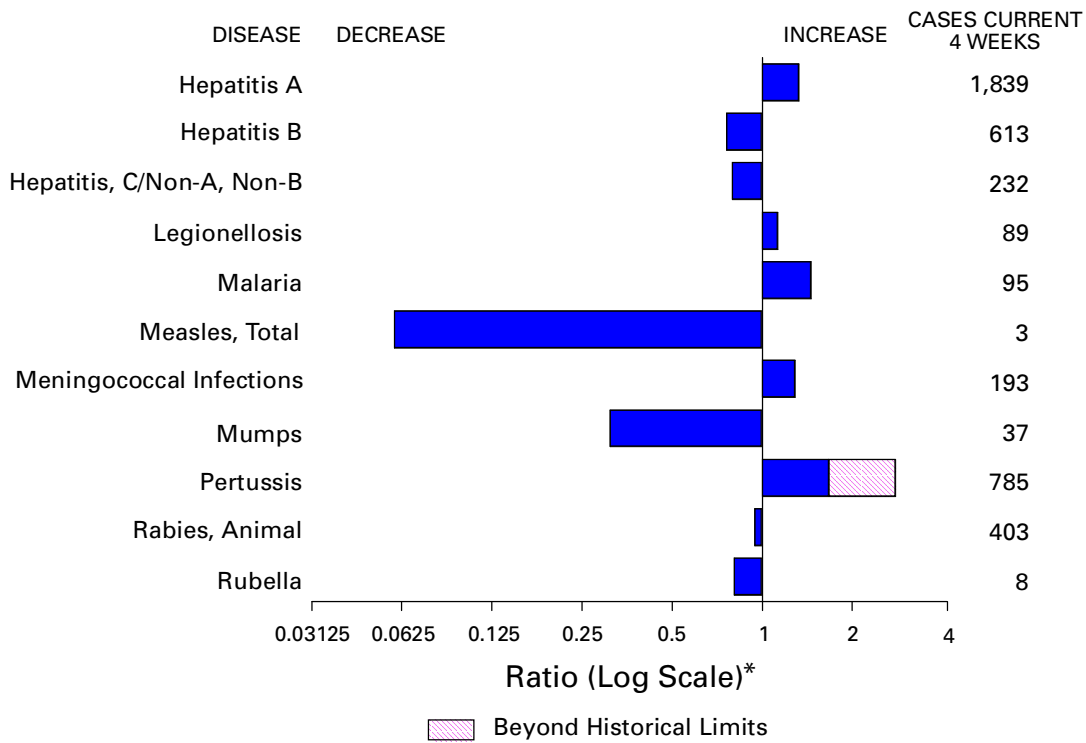








**FIGURE I. Selected notifiable disease reports, comparison of provisional 4-week totals ending December 14, 1996, with historical data — United States**



\*Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

**TABLE I. Summary — provisional cases of selected notifiable diseases, United States, cumulative, week ending December 14, 1996 (50th Week)**

	Cum. 1996		Cum. 1996
Anthrax	-	Plague	5
Brucellosis	90	Poliomyelitis, paralytic <sup>¶</sup>	-
Cholera	5	Psittacosis	46
Congenital rubella syndrome	2	Rabies, human	2
Cryptosporidiosis*	2,311	Rocky Mountain spotted fever (RMSF)	678
Diphtheria	1	Streptococcal toxic-shock syndrome*	15
Encephalitis: California*	110	Syphilis, congenital**	225
eastern equine*	2	Tetanus	27
St. Louis*	1	Toxic-shock syndrome	128
western equine*	-	Trichinosis	17
Hansen Disease	112	Typhoid fever	346
Hantavirus pulmonary syndrome* <sup>†</sup>	19	Yellow fever <sup>††</sup>	1
HIV infection, pediatric <sup>§</sup>	242		

-: no reported cases

\*Not notifiable in all states.

<sup>†</sup> Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases (NCID).

<sup>§</sup> Updated monthly to the Division of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention (NCHSTP), last update November 26, 1996.

<sup>¶</sup> Three suspected cases of polio with onset in 1996 has been reported to date.

\*\*Updated quarterly from reports to the Division of STD Prevention, NCHSTP.

<sup>††</sup> This fatal case of yellow fever is the first occurrence of this disease reported in the United States since 1924. The infection is presumed to have been acquired in Brazil.

**TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending December 14, 1996, and December 16, 1995 (50th Week)**

Reporting Area	AIDS*		Chlamydia	Escherichia coli O157:H7		Gonorrhea		Hepatitis C/NA,NB		Legionellosis	
	Cum. 1996	Cum. 1995		Cum. 1996	NETSS <sup>†</sup>	PHLIS <sup>‡</sup>	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996
				Cum. 1996	Cum. 1995						
UNITED STATES	62,258	68,191	376,408	2,647	1,570	291,569	375,018	3,206	3,917	1,014	1,099
NEW ENGLAND	2,551	3,138	15,972	339	194	6,786	7,350	110	118	81	36
Maine	42	82	914	22	-	59	88	-	-	5	6
N.H.	85	108	397	40	39	80	108	8	14	5	2
Vt.	19	28	U	35	32	46	66	38	14	5	1
Mass.	1,249	1,337	6,712	156	123	2,130	2,622	58	83	35	22
R.I.	167	211	1,759	16	-	474	533	6	7	31	5
Conn.	989	1,372	6,190	70	-	3,997	3,933	-	-	N	N
MID. ATLANTIC	17,328	18,869	43,813	221	43	33,925	42,845	303	479	233	199
Upstate N.Y.	2,385	2,254	N	146	16	6,375	8,927	237	255	76	56
N.Y. City	9,497	10,021	18,756	17	-	10,373	16,060	1	1	14	6
N.J.	3,353	4,311	7,845	58	5	5,208	5,594	-	184	14	32
Pa.	2,093	2,283	17,212	N	22	11,969	12,264	65	39	129	105
E.N. CENTRAL	4,733	5,045	76,111	566	419	53,380	74,778	444	347	289	337
Ohio	1,058	1,034	16,570	170	101	11,975	22,724	33	15	111	150
Ind.	548	494	9,068	84	55	5,974	8,677	8	14	41	80
Ill.	2,084	2,048	22,235	214	128	16,390	19,923	72	81	9	36
Mich.	788	1,131	19,360	98	73	14,646	17,228	331	237	104	35
Wis.	255	338	8,878	N	62	4,395	6,226	-	-	24	36
W.N. CENTRAL	1,443	1,547	26,946	592	356	12,027	19,022	145	86	64	75
Minn.	270	345	2,702	274	224	U	2,852	4	4	10	6
Iowa	82	104	4,054	124	101	1,104	1,477	75	13	11	21
Mo.	749	711	11,376	70	-	7,918	10,815	39	22	19	17
N. Dak.	11	5	922	16	15	33	35	-	5	-	3
S. Dak.	12	17	1,444	25	-	170	223	-	1	3	3
Nebr.	94	101	2,133	52	4	812	992	8	23	16	17
Kans.	225	264	4,315	31	12	1,990	2,628	19	18	5	8
S. ATLANTIC	15,559	17,213	52,584	135	69	91,942	104,712	248	233	165	162
Del.	264	302	1,148	2	2	1,401	2,163	1	-	11	2
Md.	2,164	2,559	6,583	N	8	13,885	13,490	5	7	30	26
D.C.	1,196	980	N	-	-	4,171	4,548	-	-	8	5
Va.	1,097	1,489	11,285	N	34	8,878	10,137	16	21	37	23
W. Va.	112	124	1	N	3	559	630	9	44	2	4
N.C.	830	963	-	44	15	17,717	22,915	46	61	12	32
S.C.	808	870	-	13	7	10,936	11,980	33	19	7	30
Ga.	2,293	2,173	11,445	30	-	17,151	19,036	U	15	3	14
Fla.	6,795	7,753	22,122	34	-	17,244	19,813	138	66	55	26
E.S. CENTRAL	2,089	2,107	30,156	76	61	33,274	39,086	559	953	52	54
Ky.	362	269	6,466	14	10	4,083	4,611	28	33	9	10
Tenn.	743	855	12,714	35	48	11,379	13,279	388	918	22	25
Ala.	569	560	8,029	15	3	12,910	15,974	9	2	4	7
Miss.	415	423	U	12	-	4,902	5,222	134	U	17	12
W.S. CENTRAL	6,313	5,994	48,410	77	13	34,214	51,235	457	369	19	22
Ark.	247	275	1,631	13	4	3,704	5,608	16	7	1	6
La.	1,375	998	7,089	7	4	7,862	10,282	222	200	3	3
Okla.	245	257	7,072	13	1	4,667	5,465	69	52	5	5
Tex.	4,446	4,464	32,618	44	4	17,981	29,880	150	110	10	8
MOUNTAIN	1,801	2,107	16,702	219	103	6,638	9,013	534	465	54	112
Mont.	34	22	-	26	-	34	67	19	16	1	4
Idaho	37	43	1,480	39	13	94	138	96	51	-	3
Wyo.	6	18	567	11	9	35	49	177	189	7	12
Colo.	463	629	U	82	43	1,077	2,685	61	66	10	40
N. Mex.	153	155	3,776	13	-	897	1,022	67	51	2	5
Ariz.	535	632	7,069	N	26	3,372	3,566	74	55	22	12
Utah	178	149	1,492	32	-	271	273	21	13	6	16
Nev.	395	459	2,318	16	12	858	1,213	19	24	6	20
PACIFIC	10,440	12,171	65,714	422	312	19,383	26,977	406	867	57	102
Wash.	642	848	8,772	154	126	1,926	2,639	50	211	6	21
Oreg.	439	451	5,047	93	59	613	789	9	37	1	-
Calif.	9,160	10,558	48,916	170	117	15,965	22,371	140	500	42	76
Alaska	30	63	1,253	5	2	424	638	3	3	1	-
Hawaii	169	251	1,726	N	8	455	540	204	116	7	5
Guam	4	-	177	N	-	32	94	1	6	2	1
P.R.	2,170	2,395	N	18	U	370	562	75	204	-	-
V.I.	18	31	N	N	U	-	-	-	-	-	-
Amer. Samoa	-	-	-	N	U	-	41	-	-	-	-
C.N.M.I.	1	-	N	N	U	11	51	-	5	-	-

N: Not notifiable U: Unavailable -: no reported cases C.N.M.I.: Commonwealth of Northern Mariana Islands

\*Updated monthly to the Division of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention, last update November 26, 1996.

†National Electronic Telecommunications System for Surveillance.

§Public Health Laboratory Information System.

**TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending December 14, 1996, and December 16, 1995 (50th Week)**

Reporting Area	Lyme Disease		Malaria		Meningococcal Disease		Syphilis (Primary & Secondary)		Tuberculosis		Rabies, Animal	
	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995
UNITED STATES	13,378	10,834	1,493	1,277	3,058	2,859	10,568	15,701	18,155	20,331	6,498	7,342
NEW ENGLAND	3,928	2,016	72	49	153	145	181	342	413	495	706	1,433
Maine	53	32	10	7	16	15	-	2	20	23	119	46
N.H.	48	27	3	2	9	23	1	1	16	17	53	147
Vt.	15	9	8	1	4	11	-	-	-	4	132	173
Mass.	354	147	23	19	66	46	80	66	215	268	107	397
R.I.	524	333	10	4	15	6	4	4	30	48	37	315
Conn.	2,934	1,468	18	16	43	44	96	269	132	135	258	355
MID. ATLANTIC	8,168	7,185	389	369	287	345	436	842	3,468	4,095	1,408	1,880
Upstate N.Y.	4,319	3,640	82	65	84	97	71	80	430	505	1,047	1,136
N.Y. City	355	440	212	202	39	52	120	357	1,810	2,241	-	-
N.J.	1,873	1,639	64	72	71	73	127	173	694	758	131	324
Pa.	1,621	1,466	31	30	93	123	118	232	534	591	230	420
E.N. CENTRAL	78	434	151	159	413	394	1,432	2,709	1,902	1,931	91	99
Ohio	51	30	13	13	148	112	524	874	296	270	13	12
Ind.	24	19	14	19	57	58	183	331	167	171	8	14
Ill.	3	18	70	78	121	102	387	1,021	968	971	25	15
Mich.	-	5	39	26	45	71	176	291	368	424	31	40
Wis.	U	362	15	23	42	51	162	192	103	95	14	18
W.N. CENTRAL	206	230	48	31	242	179	333	699	468	563	501	369
Minn.	108	134	21	10	31	26	51	45	112	134	29	30
Iowa	20	15	4	3	55	29	21	45	67	66	232	131
Mo.	37	53	10	8	96	68	213	571	187	223	18	30
N. Dak.	1	-	1	2	5	2	-	-	6	5	71	28
S. Dak.	-	-	-	2	10	10	-	-	17	26	113	102
Nebr.	5	6	3	3	21	20	12	12	21	21	5	5
Kans.	35	22	9	3	24	24	36	26	58	88	33	43
S. ATLANTIC	690	666	299	246	601	490	3,647	3,937	3,281	3,641	2,699	2,139
Del.	105	53	4	1	2	6	35	18	30	55	76	92
Md.	403	412	80	63	69	40	629	511	278	389	604	429
D.C.	3	3	7	16	10	8	129	100	125	98	11	11
Va.	51	54	57	54	61	61	377	580	293	283	586	441
W. Va.	11	24	6	4	15	9	3	10	53	69	97	114
N.C.	65	83	30	17	75	83	1,089	1,081	510	484	686	458
S.C.	9	17	12	3	64	56	384	565	320	308	87	121
Ga.	1	14	27	37	132	106	644	707	563	676	285	272
Fla.	42	6	76	51	173	121	357	365	1,109	1,279	267	201
E.S. CENTRAL	74	72	37	27	228	208	2,257	3,215	1,163	1,401	215	283
Ky.	25	15	7	3	29	48	151	179	227	309	39	28
Tenn.	21	28	14	10	60	78	818	884	349	428	88	98
Ala.	7	12	8	11	87	44	516	633	362	403	84	148
Miss.	21	17	8	3	52	38	772	1,519	225	261	4	9
W.S. CENTRAL	119	111	64	49	331	339	1,638	3,169	2,319	2,986	400	562
Ark.	23	9	-	2	34	35	231	473	192	226	27	50
La.	8	9	7	6	58	56	485	983	205	380	17	42
Okla.	24	45	-	1	42	41	171	187	165	334	34	29
Tex.	64	48	57	40	197	207	751	1,526	1,757	2,046	322	441
MOUNTAIN	7	12	57	62	171	202	136	193	602	641	151	174
Mont.	-	-	7	3	6	4	-	4	14	10	24	43
Idaho	1	-	-	1	24	12	4	-	10	14	-	3
Wyo.	2	3	7	-	3	8	2	1	6	5	31	27
Colo.	-	-	25	26	41	48	23	99	77	76	42	9
N. Mex.	1	1	2	7	27	35	1	9	80	79	6	6
Ariz.	-	1	7	13	40	59	85	45	243	318	36	56
Utah	1	1	5	6	17	18	3	4	51	38	5	15
Nev.	2	6	4	6	13	18	18	31	121	101	7	15
PACIFIC	108	108	376	285	632	557	508	595	4,539	4,578	327	403
Wash.	18	10	21	21	99	93	6	15	219	266	6	15
Oreg.	19	18	23	19	117	104	12	22	166	146	5	4
Calif.	70	80	319	228	400	342	486	556	3,898	3,910	308	377
Alaska	-	-	3	5	10	14	-	2	69	73	8	7
Hawaii	1	-	10	12	6	4	4	-	187	183	-	-
Guam	-	-	-	2	1	3	3	8	35	109	-	-
P.R.	-	-	2	1	5	24	132	267	63	162	41	38
V.I.	-	-	-	2	-	-	-	-	-	-	-	-
Amer. Samoa	-	-	-	-	-	-	-	-	-	5	-	-
C.N.M.I.	-	-	-	1	-	-	1	9	-	41	-	-

N: Not notifiable

U: Unavailable

-: no reported cases

**TABLE III. Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending December 14, 1996, and December 16, 1995 (50th Week)**

Reporting Area	<i>H. influenzae</i> , invasive		Hepatitis (viral), by type				Measles (Rubeola)			
	Cum. 1996*	Cum. 1995	A		B		Indigenous		Imported†	
			Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	1996	Cum. 1996	1996	Cum. 1996
UNITED STATES	919	1,080	27,742	29,276	9,677	9,648	-	419	2	50
NEW ENGLAND	34	39	414	299	202	222	-	14	-	1
Maine	-	3	24	30	2	12	-	-	-	-
N.H.	10	10	25	12	20	21	-	-	-	-
Vt.	1	2	11	6	11	7	-	1	-	1
Mass.	21	13	202	131	72	90	-	12	-	-
R.I.	2	5	22	34	12	8	-	-	-	-
Conn.	-	6	130	86	85	84	-	1	-	-
MID. ATLANTIC	135	160	1,808	1,889	1,391	1,442	-	23	-	5
Upstate N.Y.	12	40	420	473	328	372	-	-	-	-
N.Y. City	37	34	591	900	559	444	-	9	-	3
N.J.	58	28	335	290	247	359	U	3	U	-
Pa.	28	58	462	226	257	267	-	11	-	2
E.N. CENTRAL	164	180	2,341	3,099	973	1,090	-	6	1	8
Ohio	88	94	734	1,731	117	108	-	2	1	4
Ind.	15	20	348	186	138	238	-	-	-	-
Ill.	39	46	608	642	264	275	-	2	-	1
Mich.	11	18	483	357	387	392	-	-	-	3
Wis.	11	2	168	183	67	77	-	2	-	-
W.N. CENTRAL	52	80	2,519	1,872	548	607	-	20	-	3
Minn.	33	43	139	179	69	62	-	16	-	2
Iowa	7	3	330	98	91	46	-	-	-	1
Mo.	9	27	1,304	1,278	303	415	-	3	-	-
N. Dak.	-	-	137	23	2	4	-	-	-	-
S. Dak.	1	1	42	84	5	2	-	-	-	-
Nebr.	1	3	213	57	47	32	-	-	-	-
Kans.	1	3	354	153	31	46	-	1	-	-
S. ATLANTIC	186	210	1,450	1,121	1,503	1,249	-	5	-	9
Del.	2	-	21	10	9	9	-	1	-	-
Md.	60	67	241	213	284	252	U	-	U	2
D.C.	6	-	36	25	31	21	-	1	-	-
Va.	10	28	184	217	136	109	-	-	-	3
W. Va.	10	9	18	24	32	53	-	-	-	-
N.C.	25	31	176	106	324	286	-	3	-	1
S.C.	5	3	56	44	97	49	-	-	-	-
Ga.	39	65	153	54	32	63	-	-	-	2
Fla.	29	7	565	428	558	407	-	-	-	1
E.S. CENTRAL	27	11	1,198	2,149	842	801	-	2	-	-
Ky.	4	5	46	44	63	66	-	-	-	-
Tenn.	13	-	744	1,806	484	626	-	2	-	-
Ala.	9	5	200	86	73	109	-	-	-	-
Miss.	1	1	208	213	222	U	-	-	-	-
W.S. CENTRAL	40	69	5,856	4,540	1,262	1,406	-	26	-	2
Ark.	-	6	484	601	76	72	-	-	-	-
La.	5	1	205	184	150	233	-	-	-	-
Okla.	31	30	2,381	1,321	59	163	-	-	-	-
Tex.	4	32	2,786	2,434	977	938	-	26	-	2
MOUNTAIN	65	117	4,314	4,183	1,100	825	-	154	-	5
Mont.	-	1	113	164	16	23	-	-	-	-
Idaho	1	5	239	345	86	95	-	2	-	-
Wyo.	7	9	39	103	44	27	-	1	-	-
Colo.	15	16	499	487	131	131	-	4	-	3
N. Mex.	10	15	344	793	394	303	-	17	-	-
Ariz.	15	30	1,658	1,302	227	117	-	8	-	-
Utah	9	11	1,040	680	121	71	-	117	-	2
Nev.	8	30	382	309	81	58	-	5	-	-
PACIFIC	216	214	7,842	10,124	1,856	2,006	-	169	1	17
Wash.	4	9	710	830	111	191	-	51	-	-
Oreg.	31	27	830	2,639	117	114	-	10	-	1
Calif.	176	172	6,163	6,443	1,598	1,660	-	37	1	9
Alaska	2	2	44	48	18	12	-	63	-	-
Hawaii	3	4	95	164	12	29	-	8	-	7
Guam	-	-	5	8	-	5	-	-	-	-
P.R.	1	3	135	107	361	624	-	8	-	-
V.I.	-	-	-	9	-	16	U	-	U	-
Amer. Samoa	-	-	-	6	-	-	U	-	U	-
C.N.M.I.	10	11	1	24	5	22	U	-	U	-

N: Not notifiable U: Unavailable -: no reported cases

\*Of 214 cases among children aged <5 years, serotype was reported for 58 and of those, 22 were type b.

†For imported measles, cases include only those resulting from importation from other countries.

**TABLE III. (Cont'd.) Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending December 14, 1996, and December 16, 1995 (50th Week)**

Reporting Area	Measles (Rubeola), cont'd.		Mumps			Pertussis			Rubella		
	Total		1996	Cum. 1996	Cum. 1995	1996	Cum. 1996	Cum. 1995	1996	Cum. 1996	Cum. 1995
	Cum. 1996	Cum. 1995									
UNITED STATES	469	294	7	625	847	193	6,164	4,372	-	210	121
NEW ENGLAND	15	11	-	2	12	42	1,487	665	-	27	49
Maine	-	-	-	-	4	-	21	45	-	-	-
N.H.	-	-	-	-	1	8	157	52	-	-	1
Vt.	2	-	-	-	-	4	212	79	-	2	-
Mass.	12	4	-	2	3	30	1,030	457	-	21	9
R.I.	-	5	-	-	1	-	32	4	-	-	-
Conn.	1	2	-	-	3	-	35	28	-	4	39
MID. ATLANTIC	28	12	1	87	121	28	719	410	-	13	15
Upstate N.Y.	-	1	-	26	27	13	472	219	-	5	4
N.Y. City	12	5	-	17	16	-	48	56	-	5	8
N.J.	3	6	U	3	21	U	19	19	U	2	3
Pa.	13	-	1	41	57	15	180	116	-	1	-
E.N. CENTRAL	14	15	2	99	167	7	597	583	-	3	4
Ohio	6	2	1	43	51	1	273	167	-	-	-
Ind.	-	-	-	9	9	-	107	59	-	-	-
Ill.	3	2	-	20	48	3	160	131	-	1	-
Mich.	3	5	1	26	59	3	52	99	-	2	4
Wis.	2	6	-	1	-	-	5	127	-	-	-
W.N. CENTRAL	23	3	-	19	47	22	419	253	-	-	1
Minn.	18	-	-	6	8	16	333	125	-	-	-
Iowa	1	-	-	3	11	1	21	11	-	-	-
Mo.	3	2	-	7	23	5	47	61	-	-	-
N. Dak.	-	-	-	2	1	-	1	8	-	-	-
S. Dak.	-	-	-	-	-	-	4	12	-	-	-
Nebr.	-	-	-	-	4	-	9	14	-	-	-
Kans.	1	1	-	1	-	-	4	22	-	-	1
S. ATLANTIC	14	19	1	106	149	7	683	341	-	100	13
Del.	1	-	-	-	-	1	27	10	-	-	-
Md.	2	1	U	28	36	U	250	48	U	-	1
D.C.	1	-	-	1	-	-	4	6	-	2	-
Va.	3	-	-	16	25	1	99	31	-	2	-
W. Va.	-	-	-	-	-	-	6	-	-	-	-
N.C.	4	-	-	21	41	-	131	110	-	85	1
S.C.	-	-	-	7	11	3	48	27	-	1	-
Ga.	2	4	-	3	10	-	18	25	-	-	-
Fla.	1	14	1	30	26	2	100	84	-	10	11
E.S. CENTRAL	2	-	1	23	18	1	196	275	-	2	1
Ky.	-	-	-	-	-	-	140	26	-	-	-
Tenn.	2	-	-	3	5	-	21	208	-	-	1
Ala.	-	-	1	5	4	1	26	38	-	2	-
Miss.	-	-	-	15	9	-	9	3	N	N	N
W.S. CENTRAL	28	34	2	44	54	-	125	293	-	3	7
Ark.	-	2	-	1	7	-	10	39	-	-	-
La.	-	18	-	18	14	-	11	20	-	1	-
Okla.	-	-	-	1	-	-	19	31	-	-	-
Tex.	28	14	2	24	33	-	85	203	-	2	7
MOUNTAIN	159	70	-	22	31	39	446	643	-	7	4
Mont.	-	-	-	-	1	1	36	9	-	-	-
Idaho	2	2	-	-	4	5	108	107	-	2	-
Wyo.	1	-	-	1	-	-	8	1	-	-	-
Colo.	7	26	-	3	2	32	139	111	-	3	-
N. Mex.	17	31	N	N	N	-	61	145	-	-	-
Ariz.	8	10	-	1	2	-	29	155	-	1	3
Utah	119	-	-	2	11	1	24	31	-	-	1
Nev.	5	1	-	15	11	-	41	84	-	1	-
PACIFIC	186	130	-	223	248	47	1,492	909	-	55	27
Wash.	51	19	-	20	15	28	719	354	-	2	1
Oreg.	11	1	-	-	-	-	35	66	-	1	-
Calif.	46	108	-	171	208	19	705	430	-	49	21
Alaska	63	-	-	3	12	-	4	1	-	-	-
Hawaii	15	2	-	29	13	-	29	58	-	3	5
Guam	-	-	-	5	4	-	1	2	-	-	1
P.R.	8	3	-	1	2	-	1	2	-	-	-
V.I.	-	-	U	-	3	U	-	-	U	-	-
Amer. Samoa	-	-	U	-	-	U	-	-	U	-	-
C.N.M.I.	-	-	U	-	1	U	-	-	U	-	-

N: Not notifiable

U: Unavailable

-: no reported cases

**TABLE IV. Deaths in 121 U.S. cities,\* week ending  
December 14, 1996 (50th Week)**

Reporting Area	All Causes, By Age (Years)						P&J†	Total	Reporting Area	All Causes, By Age (Years)						P&J†	Total
	All Ages	>65	45-64	25-44	1-24	<1				All Ages	>65	45-64	25-44	1-24	<1		
NEW ENGLAND	747	543	133	49	10	12	51	S. ATLANTIC	1,351	869	280	138	33	30	92		
Boston, Mass.	172	118	34	11	2	7	5	Atlanta, Ga.	113	74	18	19	1	1	9		
Bridgeport, Conn.	46	34	7	3	2	-	7	Baltimore, Md.	181	113	32	28	5	2	19		
Cambridge, Mass.	31	25	3	2	1	-	4	Charlotte, N.C.	157	114	25	10	4	4	14		
Fall River, Mass.	38	31	7	-	-	-	-	Jacksonville, Fla.	149	95	34	14	4	2	7		
Hartford, Conn.	63	42	11	7	2	1	3	Miami, Fla.	93	55	24	9	4	1	-		
Lowell, Mass.	37	31	3	2	-	1	2	Norfolk, Va.	52	37	9	3	1	2	3		
Lynn, Mass.	22	19	1	1	-	1	2	Richmond, Va.	101	66	26	7	2	-	10		
New Bedford, Mass.	27	24	2	1	-	-	-	Savannah, Ga.	61	37	14	8	2	-	3		
New Haven, Conn.	42	23	14	5	-	-	3	St. Petersburg, Fla.	76	51	13	11	-	1	6		
Providence, R.I.	67	47	15	5	-	-	5	Tampa, Fla.	194	129	42	13	4	6	18		
Somerville, Mass.	8	4	3	1	-	-	1	Washington, D.C.	149	76	40	16	6	11	3		
Springfield, Mass.	69	49	13	5	1	1	4	Wilmington, Del.	25	22	3	-	-	-	-		
Waterbury, Conn.	33	24	7	1	1	-	4	E.S. CENTRAL	883	582	172	64	30	32	75		
Worcester, Mass.	92	72	13	5	1	1	11	Birmingham, Ala.	93	61	15	10	4	-	4		
MID. ATLANTIC	2,740	1,932	500	209	56	43	168	Chattanooga, Tenn.	75	52	14	6	3	-	5		
Albany, N.Y.	53	40	11	-	-	2	3	Knoxville, Tenn.	93	66	17	3	3	4	17		
Allentown, Pa.	22	20	2	-	-	-	-	Lexington, Ky.	80	54	17	4	3	2	12		
Buffalo, N.Y.	U	U	U	U	U	U	U	Memphis, Tenn.	207	133	38	12	6	18	20		
Camden, N.J.	34	26	6	2	-	-	2	Mobile, Ala.	119	82	21	11	3	2	1		
Elizabeth, N.J.	29	23	3	3	-	-	-	Montgomery, Ala.	51	33	12	3	2	1	4		
Erie, Pa.‡	44	37	6	-	1	-	5	Nashville, Tenn.	165	101	38	15	6	5	12		
Jersey City, N.J.	58	42	7	6	-	3	-	W.S. CENTRAL	1,687	1,130	316	148	65	28	80		
New York City, N.Y.	1,516	1,048	307	111	28	22	86	Austin, Tex.	84	54	14	11	4	1	4		
Newark, N.J.	85	42	17	17	4	5	5	Baton Rouge, La.	49	30	11	6	2	-	1		
Paterson, N.J.	29	15	8	5	1	-	2	Corpus Christi, Tex.	70	53	11	3	2	1	3		
Philadelphia, Pa.	399	275	72	35	12	5	21	Dallas, Tex.	220	141	44	16	15	4	4		
Pittsburgh, Pa.‡	63	48	7	4	2	2	6	El Paso, Tex.	93	68	17	7	1	-	5		
Reading, Pa.	13	12	1	-	-	-	5	Ft. Worth, Tex.	130	97	21	7	4	1	1		
Rochester, N.Y.	148	115	22	8	3	-	12	Houston, Tex.	429	279	80	47	16	7	38		
Schenectady, N.Y.	21	16	2	3	-	-	2	Little Rock, Ark.	64	44	9	5	1	5	7		
Scranton, Pa.‡	29	26	3	-	-	-	1	New Orleans, La.	151	85	35	22	7	2	-		
Syracuse, N.Y.	100	81	13	2	2	2	8	San Antonio, Tex.	240	167	47	11	10	5	8		
Trenton, N.J.	39	22	10	5	-	2	4	Shreveport, La.	45	30	7	6	2	-	-		
Utica, N.Y.	23	17	2	2	2	-	1	Tulsa, Okla.	112	82	20	7	1	2	9		
Yonkers, N.Y.	35	27	1	6	1	-	5	MOUNTAIN	977	650	202	80	28	17	85		
E.N. CENTRAL	2,180	1,523	409	154	40	54	156	Albuquerque, N.M.	122	71	26	15	7	3	2		
Akron, Ohio	69	56	4	6	1	2	2	Colo. Springs, Colo.	61	45	13	3	-	-	9		
Canton, Ohio	49	38	8	1	1	1	6	Denver, Colo.	106	67	25	7	2	5	15		
Chicago, Ill.	443	272	94	48	11	18	37	Las Vegas, Nev.	182	124	37	16	3	2	11		
Cincinnati, Ohio	174	120	35	12	3	4	18	Ogden, Utah	27	21	5	1	-	-	1		
Cleveland, Ohio	140	92	33	9	2	4	4	Phoenix, Ariz.	185	103	47	21	10	4	13		
Columbus, Ohio	196	141	34	13	3	5	13	Pueblo, Colo.	30	25	5	-	-	-	2		
Dayton, Ohio	125	98	20	4	2	1	11	Salt Lake City, Utah	118	84	24	5	4	1	20		
Detroit, Mich.	237	155	52	21	4	5	8	Tucson, Ariz.	146	110	20	12	2	2	12		
Evansville, Ind.	58	43	11	3	-	1	2	PACIFIC	1,581	1,124	274	118	30	34	133		
Fort Wayne, Ind.	76	65	10	1	-	-	1	Berkeley, Calif.	22	16	4	2	-	-	-		
Gary, Ind.	13	8	2	2	1	-	-	Fresno, Calif.	104	73	14	9	5	3	6		
Grand Rapids, Mich.	42	29	7	4	-	2	1	Glendale, Calif.	38	27	8	3	-	-	4		
Indianapolis, Ind.	200	137	39	10	5	9	9	Honolulu, Hawaii	94	72	16	3	1	2	7		
Madison, Wis.	U	U	U	U	U	U	U	Long Beach, Calif.	68	44	11	8	1	4	8		
Milwaukee, Wis.	164	116	32	11	4	1	23	Los Angeles, Calif.	453	320	81	30	9	13	27		
Peoria, Ill.	44	33	10	1	-	-	3	Pasadena, Calif.	20	16	3	-	-	1	1		
Rockford, Ill.	66	52	10	3	1	-	10	Portland, Ore.	155	108	30	11	4	2	16		
South Bend, Ind.	44	34	6	1	2	1	8	Sacramento, Calif.	U	U	U	U	U	U	U		
Toledo, Ohio	U	U	U	U	U	U	U	San Diego, Calif.	155	110	19	13	7	5	20		
Youngstown, Ohio	40	34	2	4	-	-	-	San Francisco, Calif.	119	74	30	14	1	-	15		
W.N. CENTRAL	845	613	141	44	15	18	57	San Jose, Calif.	U	U	U	U	U	U	U		
Des Moines, Iowa	75	53	11	8	1	2	13	Santa Cruz, Calif.	39	32	4	2	1	-	7		
Duluth, Minn.	30	22	5	2	1	-	1	Seattle, Wash.	158	110	35	12	-	1	7		
Kansas City, Kans.	32	22	7	1	1	1	-	Spokane, Wash.	67	54	9	3	-	1	8		
Kansas City, Mo.	126	80	17	8	3	4	8	Tacoma, Wash.	89	68	10	8	1	2	7		
Lincoln, Nebr.	44	33	9	1	1	-	1	TOTAL	12,991 <sup>§</sup>	8,966	2,427	1,004	307	268	897		
Minneapolis, Minn.	176	146	25	2	1	2	8										
Omaha, Nebr.	99	79	14	4	1	1	8										
St. Louis, Mo.	124	91	19	7	4	3	8										
St. Paul, Minn.	68	46	15	4	-	3	8										
Wichita, Kans.	71	41	19	7	2	2	2										

U: Unavailable - : no reported cases

\*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

†Pneumonia and influenza.

‡Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

§Total includes unknown ages.

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